

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Approval the Interlocal Agreement between the City, the Shoreline Fire Department and the Shoreline School District to establish a joint fiber optic backbone for the three agencies.
DEPARTMENT:	Finance/Information Technology
PRESENTED BY:	Debbie Tarry/Tho Dao

PROBLEM/ISSUE STATEMENT:

This Interlocal Agreement allows Shoreline School District to offer its dark or unused fiber optic cables to the City and the Shoreline Fire Department in exchange for the City and Fire Department sharing the cost to upgrade existing fiber optic cable and underground that portion of existing cable in the vicinity of Aurora Avenue North inside the City's new underground conduits. The new fiber backbone will allow the Shoreline Fire Department as well as the City to create new capability and capacity in leveraging the District's existing infrastructure.

The City's Aurora Project requires that all public and private entities with existing aerial utility cabling relocate the aerial cable in underground conduits when the new sidewalks are installed this fall. All three agencies have fiber optic cables that need to be moved underground. This agreement allows the Shoreline School District and the Fire Department to house their existing fiber optic cables within the City's own conduits. In exchange for not having to install a separate conduit, the School District is allowing the City and the Fire Department to utilize the School's dark strands in their fiber optic network to connect main buildings and remote offices (Hamlin Maintenance Yard, Richmond Highland Recreation facility) and fire stations to Fire Department Headquarters (Station 61). All parties benefit from this Agreement; the cooperation decreases the cost of installing a fiber optic backbone for the two agencies (City of Shoreline and Shoreline Fire Department) substantially and allows the Shoreline School District and Fire Department to save the cost of trenching and installing a separate underground conduit.

ALTERNATIVES ANALYZED:

Because of the Aurora project mandate of placing overhead cables to underground, all three agencies were facing substantial individual costs to relocate their fiber optic infrastructure underground. By partnering and cooperating, it is estimated that the real cost is only a fraction of what it would cost otherwise if it were to be done separately. The list below shows the items that would need to be installed separately.

A stand-alone City's Fiber Optic Backbone would require:

- Undergrounding of 12 existing strands of fiber optic cables on Aurora between the Shoreline Fire Station 61 to the Shoreline Police Department and another 12 existing strands of fiber optic cables between the Shoreline Police Department and Shoreline City Hall.
- Installation of 12 new strands of fiber optic cables starting from the Shoreline Police Department to the Richland Highland Recreation facility.
- Installation of 12 new strands of fiber optic cables starting from the Shoreline Police Department to the Hamlin Maintenance Yard

A stand-alone Fire Department Fiber Optic Backbone would require:

- Installation of 12 new strands of fiber optic cables from Station 64 to Station 61;
- Installation of 12 new strands of fiber optic cables from Station 63 to Station 61;
- Installation of 12 new strands of fiber optic cables from Station 65 to Station 61; and
- Installation of an underground conduit between 175th Avenue North to 185th Avenue North.

A stand-alone Shoreline School District Fiber Optic Backbone would require:

- Trenching and installing an underground conduit between 185th and 170th Avenue on Aurora
- Labor and material cost for undergrounding approximately 96 strands of fibers between Shoreline School District HQ (Shoreline Center) travelling west to Aurora Avenue and South to 170th Avenue

FINANCIAL IMPACT:

The timeline for the work to be performed is September 2010 with the estimated Go-Live date of December 2010. The School District is contracting the work and agreeing to seek financial reimbursements in 2011. The City received a Federal Emergency Management Performance Grant (EMPG) in the amount of \$73,089 in the 2011 budget to pay for the reimbursements.

RECOMMENDATION

Staff recommends that Council approves the Interlocal Agreement between the City, the Shoreline Fire Department and the Shoreline School District to establish a joint fiber optic backbone for the three agencies.

Approved By: City Manager  City Attorney _____

ANALYSIS

The City, the Fire District and the Shoreline School District all have existing fiber optic cables that have been strung on overhead poles along Aurora between 165th and 185th. These cables need to be removed and relocated in underground as part of the design of the Aurora project - Middle Mile, which covers the enhancement of Aurora Avenue North between 165th to 185th. The City utilizes these fiber optic cables to connect its computing infrastructure to the Fire District Station 61 to allow the establishment and support of the City's Emergency Operation Center (EOC). The Fire District uses these cables to implement their Disaster and Recovery planning where critical data are stored in remote location (The City's Police Station) and the Shoreline School District uses these cables to connect several schools on to their fiber backbone. Representatives for the three agencies have been working for the last year identifying how the three agencies could collaborate to not only achieve the goals but also look for synergies where common needs create shared benefits.

It was determined by the representatives that collaborating on this project makes good financial sense since the City is already installing its own underground conduit infrastructure between 175th and 185th. This conduit, if shared with the other two agencies, would eliminate their needs in installing their own conduit, thus reduce the overall costs. The School District has extra fiber optic cabling that connect their schools that could be offered to the City and the Fire Department without cost. With these extra strands of fiber optic cables, the District, City and the Fire Department can create a shared fiber optic backbone allowing each entity to have their own voice and data networks and avoid paying telecommunication charges or the major infrastructure investment associated with installing their own independent backbones.

The cost to the parties for construction of the JFOB is a \$162,421 total cost, proportioned as follows: District pays \$89,332 (or, 55%); City pays \$56,847 (or, 35%); Fire Department pays \$16,242 (or, 10%). Future maintenance costs of the JFOB will be proportioned as follows: District pays 55%, City pays 35% and District pays 10%.

City facilities to be connected to the JFOB after JFOB construction are the Shoreline Police Station, City Hall, and the Richmond Highlands Recreation Center. The Hamlin Park Maintenance Facility is to be connected to the District's fiber optic network in the Hamlin-park area; the City is solely responsible for this payment in the amount of \$20,518. The City is also reserving a right to connect other facilities to the JFOB in the future, so long as capacity remains.

In this Interlocal Agreement, the City is also agreeing to grant the District an easement to string a strand of fiber optic cable above ground across a heavily-treed portion of Hamlin Park, from Kellogg Middle School to the District's Central Kitchen facility.

The Agreement allows the fiber optic cable installed under the Agreement, except for that portion undergrounded as part of the Aurora Corridor Project, to be installed above-ground. SMC 13.20.060(B) does require additions and rebuilds to be installed underground, but allows parties to avoid this requirement by entering into an underground cooperation agreement that cites the requirement to underground in the event of joint trenching. This language has been added to the interlocal.

The Aurora Project with its goal of moving overhead utility cables to underground necessitates the need for the three agencies to think beyond their own objectives and boundaries and look for shared benefits. By collaborating with each other not only were the common problems solved, but new opportunities opened up as well as having the cost spread equitably among the partners. While there have been previous agreements between the parties in the past, none have reached this level of scope or complexity. It took months of planning, meetings, and negotiations to develop the technical model as well as the interlocal framework. We believe that aside from the economic benefits, there has been much goodwill generated in the process.

RECOMMENDATION

Staff recommends that Council approve the Interlocal Agreement between the City, the Shoreline Fire Department and the Shoreline School District to establish a joint fiber optic backbone for the three agencies.

ATTACHMENTS

Attachment A: Interlocal Agreement, with Exhibits A and B

Interlocal Agreement
Between

Shoreline School District
City of Shoreline
Shoreline Fire Department
For Installation and Maintenance of a Joint Fiber Optic Network

Whereas, the Interlocal Cooperation Act, as amended, and codified in Chapter 39.34 RCW provides for interlocal cooperation between governmental agencies; and

Whereas, the Shoreline School District ("District") maintains a fiber optic network within the City of Shoreline ("City"); and

Whereas, the District has a fiber optic network hub facility at the Shoreline Center and has excess unused dark fiber capacity to share with the City and the Shoreline Fire Department ("Department"); and

Whereas, the Aurora Corridor Project requires that all aerial fiber optic cable located above Aurora Avenue North be undergrounded; and

Whereas, the District, the City and the Department (collectively, the "Parties") have existing aerial fiber located above ground on Aurora Avenue North; and

Whereas the Parties desire to use the Aurora Corridor Project's undergrounding requirement as an opportunity to work collaboratively to utilize a portion of the District's excess dark fiber and to share in the cost to install and maintain a Joint Fiber Optic Backbone network from the Shoreline Center to Aurora Avenue North and North 170th ("JFOB"); and

Whereas, the JFOB will consist of (1) replacing existing fiber backbone from the Shoreline Center, west along N 185th street to Midvale Ave N, then underground as part of the Aurora Corridor Project to Aurora Ave N turning south to N 170th Street; (2) installing branch fiber lines connecting facilities at the Shoreline Police Department, Shoreline Fire Stations 61 & 64, Shoreline City Hall, the Richmond Highlands Recreation Center; and (3) installing additional ancillary fiber cable connections specific to other City and Department facilities.

Now, therefore, the Parties agree as follows:

1. All Parties shall jointly own the JFOB, consisting approximately 11,500 feet of fiber optic cable comprised of 244 strands as mapped in Exhibit A, the conduit, and pole agreements; provided that the City and the Department shall have no ownership in the District's fiber optic network.
2. The Parties will pay proportionally for the JFOB construction as described in Exhibit B and future maintenance expenses as follows:

Shoreline School District:	55%
City of Shoreline:	35%

Shoreline Fire Department: 10%

3. Facilities that will be connected to the JFOB are the Shoreline Center, Shoreline Police Station, Station 64, Station 61, City Hall, and the Richmond Highlands Recreation Center; connection costs shall be considered a construction expense, paid proportionally by each Party as set forth in Section 2.
4. The City will pay for the unique costs to install and maintain a connection between the District's fiber optic network to the Hamlin Park maintenance facility.
 - a. The City agrees to grant an easement in a recordable form agreeable to both parties to the District for an aerial overhead fiber line from the southwest corner of Kellogg Middle School property to the northeast corner of the Central Kitchen.
5. The Department will pay for the unique costs to install and maintain connections between the District's fiber optic network and Stations 63 and 65.
6. So long as adequate capacity remains, other City and Department facilities shall be allowed to install and maintain connections to the JFOB, without cost to the District.
7. The Parties remains responsible for their own connectivity and associated costs within their facilities.
8. The District will allow unrestricted access to City and the Department IT employees to the JFOB network hub facility at the Shoreline Center for trouble shooting and maintenance of equipment and connections.
9. The District will be the lead organization in the installation and maintenance of the JFOB.
10. Each Party shall protect, indemnify, and save harmless the other Party, its officers, employees, and agents from any and all costs, claims, judgments, and/or awards of damages, for injuries to persons and/or damage to tangible property, arising out of or in any way resulting from each Party's own negligent acts or omissions associated with the JFOB and connections serving the Parties' facilities as set forth in this Agreement to the extent each Party is liable for such acts or omissions. In the event the indemnified Party incurs any costs including attorney fees to enforce the provisions of this paragraph, all such costs and fees shall be recoverable from the Indemnitor.

Approved

Superintendent/Designee Date: _____

Shoreline School District _____

Approved:

Fire Chief Date: _____

Shoreline Fire
Department

Approved:

City Manager,
Robert L. Olander

Date:











City of Shoreline

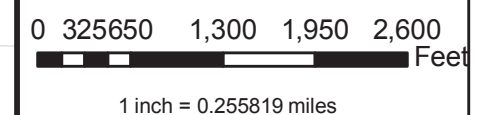
Fiber Optic Backbone

- Fiber Optic Backbone

PublicFacility

Type of Facility

-  City Facility
-  Community College
-  Elementary School
-  Fire Department
-  High School
-  Library
-  Middle School
-  Police
-  Private School
-  Other School Facility



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Exhibit B

Scope of Work: New Pole Attachment, Eng. & Permitting.

1. Consultant will provide Engineering services, drawings, and a matrix which indicates the following:

Number of poles.

Pole location.

Existing pole attachments and the height of attachments up to and including power secondary or neutral.

Distance between poles and total distance of route.

Proposed attachment height for new cabling.

Placement of slack loops and splice cases if required.

Make ready work.

2. Consultant will complete Seattle City Light pole surveys and forward completed pole attachment applications to Seattle City Light for the proposed route between the above locations.

3. The new pole attachments are from Parkwood Elm School to fire Station 65 along N 155th, from the backbone cable to fire station 64 along N 185th, Fremont & N 183rd, and at fire station 63 along 14th NE.

Scope of Work: Backbone

1. Provide and install a 244 strand S/M fiber optic cable,(aerial) from the School District Headquarters MDF, on existing Seattle City Light poles and label with 105 tags, west along N 185th to the new underground pathway, for the Aurora road improvement project starting just east of Hwy 99.

2. Provide for and place the above 244 stand fiber cable in the underground pathway and through vaults constructed and placed by others, from the point at N 185th just east of Hwy 99, across Hwy 99 and south to N 170th.

3. Provide for and dress the above installed fiber cable in the vaults and label.

4. Provide for and set up splice points along the back bone for access to the City of Shoreline Police Station, Fire Station 64, School district schools west of Hwy 99, Fire District Headquarters, Shoreline City Hall, Schools south of 175th, and the City Community Center.

5. Provide and install splice cases at each of the above splice points and splice a 12 strand fiber cable to the backbone fiber and pull into the City of Shoreline Police Station, a 12 strand for Fire station 64 and setup for a 36 strand splice to the existing School District fiber going west along 185th , a 24 strand fiber for the Fire District Headquarters , a 48 strand fiber for the Shoreline City Hall, and a 24 strand fiber to Shorewood HS, with 12

each going to Highland Terrace and Shoreline Community Center.

6. Provide and install fiber patch panels equipped with loaded coupler plates at each of the above locations along with a rack mount 4U fiber patch panel at the Shoreline School District MDF to accommodate the 244 strand fiber cable.

7. Provide and install LC connectors on all strands at the School District MDF and all strands pulled into the above locations, and terminate to the fiber patch panels.

8. Provide labeling, OTDR and Power meter testing of all strands.

9. After cutover and turn up of the new backbone fiber, Netversant will wreck out the existing aerial 96 strand fiber from the School District MDF to Hwy 99 and south on Hwy 99 to N 165th. And the existing cable between the Shoreline Police station, Fire District Headquarters, and City Hall.

10. Re-hang fiber loops at Meridian and N 185th and place in storage loops.

11. As-built drawings will be provided for all sections of work as related to this quote.

Pricing: Backbone (Includes Eng. & Permitting)

Labor	\$ 48,082.25
Material	\$ 99,573.35
Total (less taxes)	\$ 147,655.60
Sales Tax	\$ 14,027.28
DIS Fee	\$ 738.28
Total	\$ 162,421.15